

LIST OF CONTENTS

VOLUME 48, NUMBER 1, 1992

- | | |
|--|---|
| J. A. Duffie and J. Schmid (U.S.A./Germany) | 1 Editorial |
| <i>Articles</i> | |
| K. K. Gopinathan (Africa) | 3 Estimation of hourly global and diffuse solar radiation from hourly sunshine duration |
| V. V. Satyamurty and P. K. Lahiri (India) | 7 Estimation of symmetric and asymmetric hourly global and diffuse radiation from daily values |
| K. G. T. Hollands and A. P. Brunger (Canada) | 15 Optimum flow rates in solar water heating systems with a counterflow exchanger |
| R. B. Diver, J. D. Fish, R. Levitan, M. Levy, E. Meirovitch, H. Rosin, S. A. Paripatyadar, and J. T. Richardson (U.S.A./Israel) | 21 Solar test of an integrated sodium reflux heat pipe receiver/reactor for thermochemical energy transport |
| Y. Tripanagnostopoulos and P. Yianoulis (Greece) | 31 Integrated collector-storage systems with suppressed thermal losses |
| C. H. Strauss and S. C. Grado (U.S.A.) | 45 Input-output analysis of energy requirements for short rotation, intensive culture, woody biomass |
| C. J. Hoogendoorn and G. C. J. Bart (The Netherlands) | 53 Performance and modelling of latent heat stores |
| D. Feuermann and A. Zemel (Israel) | 59 Validation of models for global irradiance on inclined planes |
| | 67 <i>Solar Energy</i> upcoming issues/ISES conference information |

VOLUME 48, NUMBER 2, 1992

- | | |
|---|--|
| <i>Articles</i> | |
| R. Schaefer and P. Lowrey (U.S.A.) | 69 The optimum design of honeycomb solar ponds and a comparison with salt gradient ponds |
| A. Khogali and O. F. Al-Bar (Sudan/United Kingdom) | 79 A study of solar ultraviolet radiation at Makkah solar station |
| J. D. Garrison (U.S.A.) | 89 Estimation of atmospheric precipitable water over Australia for application to the division of solar radiation into its direct and diffuse components |

- | | | |
|---|-----|--|
| A. I. Kudish and A. Ianetz (Israel) | 97 | Analysis of the solar radiation data for Beer Sheva, Israel, and its environs |
| M. M. Elsayed and M. H. Al-Beiruty (Saudi Arabia) | 107 | Configuration factors of various elements of a shielded collector field |
| M. A. Rosen (Canada) | 123 | Investigation of the validity of the TDRC model for the distribution of diffuse sky radiance |
| J. J. Michalsky (U.S.A.) | 133 | Comparison of a National Weather Service Foster sunshine recorder and the World Meteorological Organization standard for sunshine duration |
| | | <i>Announcements</i> |
| | 143 | <i>Solar Energy</i> upcoming issues/ISES conference information |

VOLUME 48, NUMBER 3, 1992

- | | | |
|---|-----|---|
| | | <i>Articles</i> |
| M. Hussain (Bangladesh) | 145 | Correlating beam radiation with sunshine duration |
| R. A. Attalage and T. A. Reddy (Thailand) | 151 | Annual collectible energy of a two-axis tracking flat-plate solar collector |
| R. Aguiar and M. Collares-Pereira (Portugal) | 157 | Statistical properties of hourly global radiation |
| H. Suehrcke and P. G. McCormick (Australia) | 169 | A performance prediction method for solar energy systems |
| P. Mulyono, T. Honda, and A. Kanzawa (Japan) | 177 | Concentration difference heat pump using fusion and freezing processes |
| N. K. Bansal and D. Buddhi (India) | 185 | Performance equations of a collector cum storage system using phase change materials |
| R. Yang and B. D. Wood (China/U.S.A.) | 195 | A numerical modeling of an absorption process on a liquid falling film |
| H. Ti Tien and J.-W. Chen (U.S.A.) | 199 | Photoelectrolysis of water in semiconductor septum electrochemical photovoltaic cells |
| | | <i>Announcements</i> |
| | 205 | ISES conference update/ <i>Solar Energy</i> upcoming issues |

VOLUME 48, NUMBER 4, 1992

- | | | |
|---|-----|---|
| | | <i>Articles</i> |
| A. M. El-Nashar (United Arab Emirates) | 207 | Optimizing the operating parameters of a solar desalination plant |

| | | |
|--|-----|--|
| S. Roy, A. K. Jana, and B. B. Bhowmik (India) | 215 | Kinetics of temperature-dependent photoinduced redox reactions in a photoelectrochemical cell |
| Alfonso Soler (Spain) | 221 | Dependence on solar elevation and the daily sunshine fraction of the correlation between monthly-average-hourly diffuse and global radiation |
| A. C. Oliveira and E. de Oliveira Fernandes (Portugal) | 227 | A new simplified method for evaluating the thermal behaviour of direct gain passive solar buildings |
| I. R. Edmonds (Australia) | 235 | The performance of bifacial solar cells in prism-coupled compound parabolic concentrators |
| S. Kabelac and F.-D. Drake (Germany) | 239 | The entropy of terrestrial solar radiation |
| G. Major (Hungary) | 249 | Estimation of the error caused by the circumsolar radiation when measuring global radiation as a sum of direct and diffuse radiation |
| D. Faiman, D. Feuermann, P. Ibbetson, and A. Zemel (Israel) | 253 | A multipyranometer instrument for obtaining the solar beam and diffuse components, and the irradiance on inclined planes |
| J. González, L. R. Pérez, and J. Benítez (Puerto Rico) | 261 | Modeling the thermal process in a shallow solar pond water heater |
| S. S. Peltola and P. D. Lund (Finland) | 267 | Comparison of analytical and numerical modeling approaches for sizing of seasonal storage solar heating systems |
| | 275 | <i>Books Received</i> |
| | | <i>Announcements</i> |
| | 277 | ISES Conference information/ <i>Solar Energy</i> upcoming issues |

VOLUME 48, NUMBER 5, 1992

| | | |
|---|-----|--|
| | | <i>Articles</i> |
| I. A. Olwi, J. A. Sabbagh, and A. M. A. Khalifa (Saudi Arabia) | 279 | Mathematical modeling of passive dry cooling for power plants in arid land |
| J. Srinivasan (India) | 287 | Convection suppression in horizontal solar collectors using density stratification |
| P. D. Lund and S. S. Peltola (Finland) | 291 | SOLCHIPS—a fast predesign and optimization tool for solar heating with seasonal storage |
| N. Fraidenraich, J. M. Gordon, and C. Tiba (Brazil/Israel) | 301 | Optimization of gas-turbine combined cycles for solar energy and alternative-fuel power generation |

- | | | |
|--|-----|---|
| M. R. Yeung, P. K. Yuen, A. Dunn, and L. S. Cornish (Hong Kong) | 309 | Performance of a solar-powered air conditioning system in Hong Kong |
| V. Bădescu (Romania) | 321 | Calculation of direct solar radiation on tilted surfaces |
| A. Ben Djemaa and C. Delorme (France) | 325 | A comparison between one year of daily global irradiation from ground-based measurements versus METEOSAT images from seven locations in Tunisia |
| D. R. Mills and A. G. Monger (Australia) | 335 | Radiation limitation of stagnation temperature in high temperature selective absorbers |
| R. Almanza, F. Muñoz, and M. Mazari (Mexico) | 339 | Development of aluminum first surface mirrors for solar energy applications |
| | 345 | <i>Books Received</i> |
| | | <i>Announcements</i> |
| | 347 | ISES conference information/ <i>Solar Energy</i> upcoming issues |

VOLUME 48, NUMBER 6, 1992

- | | | |
|---|-----|--|
| | | <i>Articles</i> |
| Z. M. Salameh and W. A. Lynch (U.S.A.) | 349 | Single-stage dual priority regulator for photovoltaic systems |
| C. M. P. Cunha and J. A. R. Parise (Brazil) | 353 | Modelling of the dynamics of a low-speed gas-liquid heat engine |
| M. J. Rightley, L. K. Matthews, and G. P. Mulholland (U.S.A.) | 363 | Experimental characterization of the heat transfer in a free-falling-particle receiver |
| G. A. Bemporad (Italy) | 375 | The use of pressure-retarded osmosis for increasing the solar pond efficiency |
| W. J. Platzer (Germany) | 381 | Calculation procedure for collectors with a honeycomb cover of rectangular cross section |
| M. Levy, R. Levitan, E. Meirovitch, A. Segal, H. Rosin, and R. Rubin (Israel) | 395 | Chemical reactions in a solar furnace 2: direct heating of a vertical reactor in an insulated receiver. Experiments and computer simulations |
| M. Sokolov and M. Reshef (Israel) | 403 | Performance simulation of solar collectors made of concrete with embedded conduit lattice |
| P. Reeves, R. Ohlhausen, D. Sloan, K. Pamplin, T. Scoggins, C. Clark, B. Hutchinson, and D. Green (U.S.A.) | 413 | Photocatalytic destruction of organic dyes in aqueous TiO ₂ suspensions using concentrated simulated and natural solar energy |

K. Zabara and P. Yianoulis
(Greece)

- 421 Conditional probabilities of daily relative sunshine data
and the dependence on the weather of the previous
day

Announcements

- 429 ISES Conference Information/*Solar Energy* Upcoming
Issues

- 431 ISES International Awards

Index

- 433 Volume 48, 1992—List of Contents and Author Index

